Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
2020 L Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

Winston H. Hickox
Agency Secretary

Gray Davis
Governor

Dear Sir or Madam:

Enclosed is the draft architectural coatings control measure (SCM) for your review, as discussed in the notice for the December 14, 1999, workshop. The SCM is also available on our website at: http://www.arb.ca.gov/arch/arch.htm. The SCM reflects changes made since the last workshop on September 18, 1999. We would appreciate any comments that you may have on the SCM by December 21, 1999. The December 14, 1999, workshop will be held at the South Coast Air Quality Management District from 9:00 a.m. to 4:00 p.m.

If you have any questions about the SCM or the December 14, 1999, workshop, please do not hesitate to call Mr. Jim Nyarady, Manager, Strategy Evaluation Section, or Ms. Barbara Fry, Manager, Measures Development Section. Mr. Nyarady's telephone number is (916) 322-8273, and his electronic mail address is jnyarady@arb.ca.gov. Barbara Fry's telephone number is (916) 322-8267, and her electronic mail address is bfry@arb.ca.gov.

Sincerely,

Janette Brooks, Chief
Air Quality Measures Branch
Stationary Source Division

Enclosure

cc: Mr. Jim Nyarady, Manager
Strategy Evaluation Section
Criteria Pollutants Branch

Ms. Barbara Fry, Manager
Measures Development Section
Air Quality Measures Branch

Mr. Dick Baldwin, Chairman
CAPCOA's Architectural Coatings SCM Committee

xxx ~~1999~~ 2000

California Air Resources Board (ARB)
Suggested Control Measure for Architectural Coatings

RULE _____ ARCHITECTURAL COATINGS

1. APPLICABILITY

1.1 Except as provided in subsection 1.2, this rule is applicable to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use within the District, as well as any person who applies or solicits the application of any architectural coating within the District.

1.2 This rule does not apply to:

1.2.1 Any architectural coating that is manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.

1.2.2 Any aerosol coating product.

1.2.3 Any architectural coating that is sold in a container with a volume of one quart (0.946 liter) or less.

2. DEFINITIONS

2.0 Adhesive: Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

2.1 Aerosol Coating Product: A pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marking applications.

2.2 Appurtenance: Any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

2.3 Architectural Coating: A coating ~~recommended for application~~ applied to stationary structures and their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and

adhesives are not considered architectural coatings for the purposes of this rule.

2.4 Bitumens: Black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.

2.4a Bituminous Roof Coating: A coating labeled as and formulated ~~and recommended~~ for roofing that incorporates bitumens.

2.5 Bond Breaker: A coating labeled as and formulated ~~and recommended~~ for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.

2.5a Clear Brushing Lacquers: Clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, ~~and~~ which are intended exclusively for application by brush, and which are labeled as specified in subsection 4.1.6.

2.6 Clear Wood Coatings: Clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates to provide a transparent or translucent solid film.

2.7 Coating: A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, and stains.

2.8 Colorant: A concentrated pigment dispersion in water, solvent, and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.

2.9 Concrete Curing Compound: A coating labeled as and formulated ~~and recommended~~ for application to freshly poured concrete to retard the evaporation of water.

2.10 Dry Fog Coating: A coating labeled as and formulated ~~and recommended~~ only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.

2.11 Exempt Solvent: A compound identified as exempt under the definition of Volatile Organic Compound (VOC), subsection 2.43. Exempt compounds content shall be analyzed by Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-93, incorporated by reference in subsection 5.5.9.

2.11a Faux Finishing Coating: A coating labeled and formulated as a stain or glaze to create artistic effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain, which require the finish to remain wet for an extended period of

time.

2.11b Fire-Resistant Coating: An opaque coating labeled as and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing assemblies of structural materials into compliance with federal, state, and local building code requirements. The fire-resistant coating shall be tested in accordance with time-temperature criteria of approved test methods in the applicable building code.

2.12 Fire-Retardant Coating: A coating ~~which is fire tested and rated by an approved laboratory, and is used to bring~~ labeled as and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local ~~fire~~ building code requirements. The fire-retardant coating shall be tested in accordance with ASTM Method E 84-99, incorporated by reference in subsection 5.5.1.

2.13 Flat Coating: A coating that is not defined under any other definition in this rule and that registers gloss less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to ASTM Designation D 523-89 (1999), ~~"Standard Test Method for Specular Gloss," (date), (~~incorporated by reference in subsection 5.5.2~~)~~.

2.14 Floor Coating: An opaque coating that is labeled as and formulated ~~and recommended~~ for application to flooring including, but not limited to, decks, porches, and steps, for the purposes of abrasion resistance.

2.15 Form-Release Compound: A coating labeled as and formulated ~~and recommended~~ for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.

2.16 Graphic Arts Coating or Sign Paint: A coating labeled as and formulated ~~and recommended~~ for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers, and bulletin enamels.

2.17 High-Temperature Coating: A high performance coating labeled as and formulated~~, recommended, and used~~ for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

2.18 Industrial Maintenance Coating: A high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated ~~and recommended~~ for application to substrates exposed to one or more of the following extreme environmental conditions listed in subsections 2.18.1 through 2.18.5, and labeled as specified in subsection 4.1.5:

2.18.1 Immersion in water, wastewater, or chemical solutions (aqueous and non-

aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;

2.18.2 Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;

2.18.3 Repeated exposure to temperatures above 121°C (250°F);

2.18.4 Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleansers, or scouring agents; or

2.18.5 Exterior exposure of metal structures and structural components.

2.19 Lacquer: A clear or opaque wood coating, including clear lacquer sanding sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid, protective film. Lacquer stains are considered stains, not lacquers.

2.20 Low Solids Coating: A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material ~~and for which at least half of the volatile component, by volume, is water~~.

2.21 Magnesite Cement Coating: A coating labeled as and formulated ~~and recommended~~ for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

2.22 Mastic Texture Coating: A coating labeled as and formulated ~~and recommended~~ to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.

2.23 Metallic Pigmented Coating: A coating containing at least 48 grams of elemental metallic pigment per liter of coating as applied (0.4 pounds per gallon), when tested in accordance with.SCAQMD Method 318-95, incorporated by reference in subsection 5.5.4.

2.24 Multi-Color Coating: A coating that is packaged in a single container and ~~applied in a single coat which~~ that exhibits more than one color when applied in a single coat.

2.25 Nonflat Coating: A coating that is not defined under any other definition in this rule and that registers a gloss of 15 or greater on an 85-degree meter ~~or~~ and 5 or greater on a 60-degree meter according to ASTM Designation D 523-89, ~~"Standard Test Method for Specular Gloss," (date), (~~incorporated by reference in subsection 5.5.2~~)~~.

2.25a Post-Consumer Coating: A finished coating that would have been disposed of as a solid waste, having completed its life cycle as a consumer item, and which does not include manufacturing wastes.

2.26 Pre-Treatment Wash Primer: A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613-96, incorporated by reference in subsection 5.5.5, that is labeled as and formulated ~~and recommended~~ for

application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

2.27 Primer: A coating labeled as and formulated ~~and recommended~~ for application to a substrate to provide a firm bond between the substrate and subsequent coats.

2.28 Quick-Dry Enamel: A nonflat coating that is labeled as specified in subsection 4.1.7 and that has the following characteristics:

2.28.1 Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16 and 27°C (60 and 80°F);

2.28.2 When tested in accordance with ASTM Designation D 1640-~~83 (Reapproved 1989)~~ 95, ~~"Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature,"~~and the Mechanical Test Method of ASTM Test Method D 1640-95, ~~(~~incorporated by reference in subsection 5.5.6~~)~~, sets to touch in 2 hours or less, is tack free in 4 hours or less, and dries hard in 8 hours or less by the mechanical test method; and

2.28.3 Has a dried film gloss of 70 or above on a 60 degree meter.

2.28a Quick-Dry Primer, Sealer, and Undercoater: A primer, sealer, or undercoater that is labeled as specified in subsection 4.1.6 and that is dry to the touch in a ½ hour and can be recoated in 2 hours when tested in accordance with ASTM Method D 1640-~~83 (Reapproved 1989)~~ 95, ~~"Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature," (date),~~ ~~(~~incorporated by reference in sub~~part~~ section 5.5.6~~)~~.

2.28b Recycled Coating: An architectural coating that is labeled as specified in subsection 4.1.10 and contains not less than 50 percent by weight post-consumer coating.

2.29 Residential Use: Use in areas where people reside or lodge including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.

2.30 Roof Coating: A non-bituminous coating labeled as and formulated ~~and recommended~~ for application to exterior roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and reflecting ultraviolet radiation. Metallic pigmented roof coatings which qualify as metallic pigmented coatings shall not be considered to be in this category, but shall be considered to be in the metallic pigmented coatings category.

2.31 Rust Preventative Coating: A coating formulated ~~and recommended~~ for use in preventing the corrosion of metal surfaces in residential situations and labeled as in subsection 4.1.8.

2.32 Sanding Sealer: A clear wood coating labeled as and formulated ~~and recommended~~ for application to bare wood to seal the wood and to provide a coat that can be sanded to create a smooth surface. A sanding sealer that also meets the definition of a lacquer is

not included in this category, but is included in the lacquer category.

2.33 Sealer: A coating labeled as and formulated ~~and recommended~~ for application to a substrate for one or more of the following purposes: to prevent subsequent coatings from being absorbed by the substrate; to prevent harm to subsequent coatings by materials in the substrate; to prevent harm to the substrate; or to block stains, odors, or efflorescence.

2.34 Shellac: A clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Laciffer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

2.36 Shop Application: Application of a coating ~~is applied~~ to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process (e.g., original equipment manufacturing coatings).

2.35 Solicit: To require for use or to specify, by written or oral contract.

2.36a Specialty Primer: A coating labeled as specified in subsection 4.1.9 and that is formulated ~~and recommended~~ for application to a substrate~~:~~ to seal fire, smoke or water damage; or to condition excessively chalky surfaces. An excessively chalky surface is one that is defined as having chalk rating of four or less as determined by ASTM Determination D~~-~~4214-98, ~~"Photographic Reference Standard No. 1 Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films" (date), or the Federation of Societies for Coatings Technology "Pictorial Standards for Coatings Defects," (date) (~~incorporated by reference in subsection 5.5.6a~~)~~.

2.37 Stain: An opaque, clear, or semitransparent coating labeled as and formulated to change the color of a surface but not conceal the grain pattern or texture. ~~This~~ includesing lacquer stains.

2.38 Swimming Pool Coating: A coating labeled as and formulated ~~and recommended~~ to coat the interior of swimming pools and to resist swimming pool chemicals.

2.38a Swimming Pool Repair and Maintenance Coating: A ~~chlorinated~~ rubber based coating labeled as and used over existing rubber based coatings for the repair and maintenance of swimming pools ~~over existing chlorinated rubber based coatings~~.

2.39 Tint Base: An architectural coating to which colorant is added after packaging in sale units to produce a desired color.

2.40 Traffic Marking Coating: A coating labeled as and formulated ~~and recommended~~ for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks, and airport runways.

2.41 Undercoater: A coating labeled as and formulated ~~and recommended~~ to provide a smooth surface for subsequent coatings.

2.42 Varnish: A clear or semi-transparent coating, excluding lacquers and shellacs, labeled as and formulated ~~and recommended~~ to provide a durable, solid, protective film. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.

2.43 Volatile Organic Compound (VOC): Any compound containing at least one atom of carbon, ~~which may be emitted to the atmosphere during the application of and or subsequent drying or curing of coatings subject to this rule,~~ excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and excluding the following:

2.43.1 methane;
methylene chloride (dichloromethane);
1,1,1-trichloroethane (methyl chloroform);
trichlorofluoromethane (CFC-11);
dichlorodifluoromethane (CFC-12);
1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
chloropentafluoroethane (CFC-115);
chlorodifluoromethane (HCFC-22);
1,1,1-trifluoro-2,2-dichloroethane (HCFC-123);
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
1,1-dichloro-1-fluoroethane (HCFC-141b);
1-chloro-1,1-difluoroethane (HCFC-142b);
trifluoromethane (HFC-23);
pentafluoroethane (HFC-125);
1,1,2,2-tetrafluoroethane (HFC-134);
1,1,1,2-tetrafluoroethane (HFC-134a);
1,1,1-trifluoroethane (HFC-143a);
1,1-difluoroethane (HFC-152a);
cyclic, branched, or linear completely methylated siloxanes;
the following classes of perfluorocarbons:

(A) cyclic, branched, or linear, completely fluorinated alkanes;
(B) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
(C) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
(D) sulfur-containing perfluorocarbons with no unsaturations and with the sulfur bonds only to carbon and fluorine; and

2.43.2 the following low-reactive organic componds which have been exempted by the U.S. EPA:

acetone;
ethane;
parachlorobenzotrifluoride (1-chloro-4-trifluoromethyl benzene);
perchloroethylene; and
methyl acetate.

2.44 VOC Content: The weight of VOC per volume of coating, calculated according to the procedures specified in subsection 5.1.

2.45 Waterproofing Wood Sealer: A coating labeled as and formulated ~~and recommended~~ for application to a wood substrate for the primary purpose of preventing the penetration of water.

2.46 Waterproofing Concrete/Masonry Sealer: A clear or pigmented coating that is labeled as and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and staining.

2.47 Wood Preservative: A coating labeled as and formulated ~~and recommended~~ to protect exposed wood from decay or insect attack, ~~and which contains a wood preservative chemical~~ that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, *et seq.*) and ~~that is registered~~ with the California Department of Pesticide Regulation.

3. STANDARDS

3.1 **VOC Content Limits:** Except as provided in subsections 3.2 and 3.3, and 3.9, no person shall, within the District, supply, offer for sale, sell, apply, or solicit the application of any architectural coating listed in Table 1 which contains VOC in excess of the corresponding limit specified in Table 1, after the corresponding date specified, or manufacture, blend, or repackage such a coating for use within the District.

3.2 **Most Restrictive VOC Limit:** If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in Table 1, then the most restrictive VOC content limit shall apply. This provision does not apply to subsections 3.2.1 through 3.2.1~~0~~2.

3.~~3~~2.1 Lacquer coatings (including lacquer sanding sealers but excluding lacquer stains) that are also ~~recommended~~ labeled for use in other architectural coating applications to wood~~, except as stains,~~ are subject only to the VOC content limit in Table 1 for lacquers.

3.~~3~~2.2 Metallic pigmented coatings that are also ~~recommended~~ labeled for use as high temperature coatings, roof coatings, industrial maintenance coatings, or primers are subject only to the VOC content limit in Table 1 for metallic pigmented coatings.

3.~~3~~2.3 Shellacs that are also ~~recommended~~ labeled for use as any other architectural coating are subject only to the VOC content limit in Table 1 for shellacs.

3.~~3~~2.4 Fire-retardant coatings that are also ~~recommended~~ labeled for use as any other architectural coating are subject only to the VOC content limit in Table 1 for fire-retardant coatings.

3.~~3~~2.5 Pretreatment wash primers that are also ~~recommended~~ labeled for use as primers or that meet the definition for industrial maintenance coatings are subject only to the VOC content limit in Table 1 for pretreatment wash primers.

3.~~3~~2.6 Industrial maintenance coatings that are also ~~recommended~~ labeled for use as primers, sealers, or undercoaters are subject only to the VOC content limit in Table 1 for industrial maintenance coatings.

3.~~3~~2.7 Varnishes that are also ~~recommended~~ labeled for use as floor coatings are subject only to the VOC content limit in Table 1 for varnishes.

3.~~3~~2.8 Waterproofing sealers that also meet the definition for quick-dry sealers are subject only to the VOC content limit in Table 1 for waterproofing sealers.

3.~~3~~2.9 Sanding sealers that also meet the definition for quick-dry sealers or wood waterproofing sealers are subject only to the VOC content limit in Table 1 for sanding sealers.

~~3.2.10 Rust preventative coatings that also meet the definition for industrial maintenance coatings are subject only to the VOC content limit in Table 1 for rust preventative coatings.~~

3.2.11 Wood preservatives that also meet the definition for stains are subject only to the VOC content limit in Table 1 for wood preservatives.

3.2.12 High temperature coatings that meet the definition of or are labeled for use as industrial maintenance coatings are subject only to the VOC content limit in Table 1 for high temperature coatings.

3.3 **Sell-Through ~~Provision~~ of Coatings:** The sale, supply, or offer for sale ~~or application~~ of a coating manufactured prior to the effective date of the corresponding standard in Table 1, and not complying with that standard, shall not constitute a violation of subsection 3.1 until three years after the effective date of the standard. This subsection does not apply to any coating that does not display the date or date-code required by subsection 4.1.1.

3.4 **Painting Practices:** All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use. "Not in use" includes, but is

not limited to, any interruption, delay, completion of transfer of the contents, or termination of the application.

3.5 **Thinning:** Any person who applies or solicits the application of any architectural coating within the District shall follow the manufacturer's recommendation regarding thinning of the coating under normal environmental and application conditions as described in subsection 4.1.2. This ~~recommendation shall~~ requirement does not apply to the thinning of architectural coatings with water. No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in Table 1.

3.6 **Industrial Maintenance ~~and Rust Preventative~~ Coatings:** Any person who applies or solicits the application of any architectural coating within the District shall follow the manufacturer's recommendation regarding the application of industrial maintenance coatings as described in subsection 4.1.5. Effective July 1, 2002, ~~N~~no person who applies or solicits the application of any architectural coating shall apply an industrial maintenance coating in or on a residence as defined in subsection 2.29 or in or on areas of industrial, commercial, or institutional facilities not exposed to the extreme environmental conditions identified in subsection 2.18, such as office space and meeting rooms. ~~No person shall apply or solicit the application of any rust-preventative coating for industrial use.~~

3.6a **Rust Preventative Coatings:** Effective July 1, 2002, no person shall apply or solicit the application of any rust preventative coating for industrial use, unless such a rust preventative coating complies with the industrial maintenance coatings VOC limit.

3.6b **Swimming Pool Repair and Maintenance Coatings:** No person shall apply or solicit the application of any swimming pool repair and maintenance coating, as defined in section 2, on an unpainted pool surface, such as in a new pool, a newly re-plastered pool, or a newly sandblasted pool.

3.7 **Coatings Not Listed in Table 1:** For any coating that does not meet any of the definitions for the specialty coatings categories listed in Table 1, the VOC content limit shall be determined by classifying the coating as a flat coating or a nonflat coating, based on its gloss, as defined in subsections 2.13 and 2.25, and the corresponding flat or nonflat VOC limit shall apply.

~~3.8 **No New Uses of Toxic Exempt Compounds:** No person shall supply, sell, offer for sale, manufacture, apply, or solicit the application of any architectural coating that contains any of the following compounds, which have been identified by the California Air Resources Board (ARB) as toxic air contaminants: 1,1,1-trichloroethane, perchloroethylene, methylene chloride. This provision does not apply to any existing product formulation, or any existing product formulation that is reformulated to meet the VOC limits specified in Table 1, as long as the percentage of toxic air contaminants in the reformulated coating does not increase. For the purposes of this subsection, an "existing product formulation" means any product formulation that is supplied, sold,~~

~~offered for sale, manufactured for sale in California prior to (date of adoption).~~

3.9 **Averaging Compliance Option:** [language to be developed]

4. CONTAINER LABELING REQUIREMENTS

4.1 Each manufacturer of any architectural coating subject to this rule shall display the information listed in subsections 4.1.1 through 4.1.5 on the coating container or label in which the coating is sold or distributed.

4.1.1 **Date Code:** The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the ~~Air Pollution Control Officer and the~~ Executive Officer of the ARB.

4.1.2 **Thinning Recommendations:** A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.

4.1.3 **VOC Content:** Each container of any coating subject to this rule shall display either the maximum or the actual VOC content of the coating, ~~as applied, and after~~ as designed for application, including ~~any~~ the maximum thinning as recommended by the manufacturer~~.~~. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in subsection 5.2. The equations in subsection 5.1 shall be used to calculate VOC content.

4.1.5 **Industrial Maintenance Coatings:** In addition to the information specified in subsection 4.1.1, 4.1.2, and 4.1.3, each manufacturer of any industrial maintenance coating subject to ~~the provisions of~~ this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the descriptions listed in subsections 4.1.5.1 through 4.1.5.4.

4.1.5.1 "For industrial use only."

4.1.5.2 "For professional use only."

4.1.5.3 "Not for residential use" or "Not intended for residential use."

4.1.5.4 "This coating is intended for use under the following condition(s):" (Include each condition in subsections 4.1.5.4.1 through 4.1.5.4.5 that applies to the coating.)

4.1.5.4.1 Immersion in water, wastewater, or chemical solutions (aqueous and nonaqueous solutions), or chronic exposure of interior surfaces to

moisture condensation;

4.1.5.4.2 Acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;

4.1.5.4.3 Repeated exposure to temperatures above 121°C (250°F);

4.1.5.4.4 Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleaners, or scouring agents; or

4.1.5.4.5 Exterior exposure of metal structures and structural components.

4.1.6 **Clear Brushing Lacquers:** Effective July 1, 2002, ~~E~~each container of this category shall ~~have~~ display explicit label instructions that the product is formulated for brush application only, and that ~~reduction~~ thinning and/or spraying is not permitted.

4.1.7 **Quick-Dry:** Effective July 1, 2002, ~~T~~the coating container label or container shall ~~include~~ display the words "Quick-Dry" or shall list the following:

4.1.7.1 The recoat time for quick-dry primers, sealers, and undercoaters, or

4.1.7.2 The dry-hard time for quick-dry enamels.

4.1.7.3 Containers and container labels shall not contain the words "Quick-Dry" unless the material meets the dry times specified in the respective definitions or the material complies with the respective general VOC limit for enamels or primers, sealers, and undercoaters.

4.1.8 **Rust Preventative Coatings:** Effective July 1, 2002, ~~T~~the labels of rust preventative coatings shall include the statement "For Metal Substrates Only" prominently displayed~~, effective July 1, 2002~~.

4.1.9 **Specialty Primers:** Effective July 1, 2002, ~~T~~the labels of all specialty primers shall include the statement "For Fire-, Smoke-, Water-Damaged, or Excessively Chalky Substrates Only" prominently displayed~~, effective July 1, 2002~~.

4.1.10 **Recycled Coatings:** Effective July 1, 2002, the labels of recycled coatings shall display the minimum or exact weight percent content of post-consumer coating as defined in subsection 2.25a.

5. COMPLIANCE PROVISIONS AND TEST METHODS

5.1 **Calculation of VOC Content:** For the purpose of determining compliance with the VOC content limits in Table 1, the VOC content of a coating shall be determined by

using the procedures described in subsection 5.1.1 or 5.1.2, as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

5.1.1 With the exception of low solids coatings, determine the VOC content in grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and exempt compounds. ~~Calculate~~ Determine the VOC content using equation 1 as follows:

$$\text{VOC Content} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})} \qquad \textbf{(1)}$$

Where:

VOC content	=	grams of VOC per liter of coating
W_s	=	weight of volatiles, in grams
W_w	=	weight of water, in grams
W_{ec}	=	weight of exempt compounds, in grams
V_m	=	volume of coating, in liters
V_w	=	volume of water, in liters
V_{ec}	=	volume of exempt compounds, in liters

5.1.2 For low solids coatings, determine the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, including the volume of any water and exempt compounds. ~~Calculate~~ Determine the VOC content using equation 2 as follows:

$$\text{VOC Content}_{ls} = \frac{(W_s - W_w - W_{ec})}{(V_m)} \qquad \textbf{(2)}$$

Where:

VOC content_{ls}	=	the VOC content of a low solids coating in grams of VOC per liter of coating
W_s	=	weight of volatiles, in grams
W_w	=	weight of water, in grams
W_{ec}	=	weight of exempt compounds, in grams
V_m	=	volume of coating, in liters

5.2 **VOC Content of Coatings:** To determine the ~~composition~~ physical properties of a coating in order to perform the calculations in subsection 5.1, the reference method for VOC content is Method 24, ~~of appendix A of 40 Code of Federal Regulations (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings," (date) (which is~~ incorporated by reference ~~herein~~ in subsection 5.5.10~~)~~, except as provided in subsections 5.3 and 5.4. An alternative method to determine the VOC content of coatings is ~~South Coast Air Quality~~

~~Management District (~~SCAQMD~~)~~ Method 304~~-~~91 (Revised February 1996), ~~which is~~ incorporated by reference ~~herein~~ in subsection 5.5.10. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in subsection 5.5.9. To determine the VOC content of a coating, the manufacturer may use Method 24 ~~of Appendix A of 40 CFR part 60~~, or an alternative method as provided in subsection 5.3, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 test results will govern, except when an alternative method is approved as specified in subsection 5.3. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct a Method 24 analysis.

~~5.2a **Clear Brushing Lacquers:** Manufacturers of clear brushing lacquers shall, within three months of the end of each calendar year, submit an annual report to the District APCO and the Executive Officer of the ARB reporting the number of gallons of such coatings sold in the District during the preceding year.~~

~~5.2b **Rust Preventative Coatings:** Manufacturers of rust preventative coatings shall, within three months of the end of each calendar year, submit an annual report to the District APCO and the Executive Officer of the ARB reporting the number of gallons of such coatings sold in the District during the preceding year.~~

~~5.2c **Specialty Primers:** Manufacturers of specialty primers shall, within three months of the end of each calendar year, submit an annual report to the District APCO and the Executive Officer of the ARB reporting the number of gallons of such coatings sold in the District during the preceding year.~~

5.3 **Alternative Test Methods:** Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with subsection 5.2, after review and approved in writing by the staffs of the District, the ARB, and the U.S. EPA, may also be used.

5.4 **Methacrylate Traffic Marking Coatings:** Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according a modification of Method 24, ~~to the procedures specified in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings," (date)~~ incorporated by reference in subsection 5.5.12. This method ~~is a modification of Method 24 of appendix A of 40 CFR part 60, and it~~ has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.

5.5 **Test Methods:** For the purpose of this rule, the following test methods shall be used:

5.5.1 **Flame Spread Index:** The flame spread index of a fire-retardant coating subject

to the provisions of this rule shall be determined by ASTM Designation E 84-99, "Standard Test Method for Surface Burning Characteristics of Building Materials," incorporated by reference in section 2., Fire-Retardant Coating.

5.5.2 **Gloss Determination:** The gloss of a coating subject to the provisions of this rule shall be determined by ASTM Designation D 523-89 (1999), "Standard Test Method for Specular Gloss," ~~(date),~~ incorporated by reference in section 2., Flat Coating, Nonflat Coating, and Quick-Dry Enamel.

5.5.4 **Metal Content of Coatings:** The metallic content of a coating subject to the provisions of this rule shall be determined by SCAQMD Method ~~311-91, "Determination of Percent Metal in Metallic Coatings by Spectrographic Method," (date)~~ 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," SCAQMD "Laboratory Methods of Analysis for Enforcement Samples," incorporated by reference in section 2., Metallic Pigmented Coating.

5.5.5 **Acid Content of Coatings:** The acid content of a coating subject to the provisions of this rule shall be determined by ASTM Designation D 1613-~~85~~96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products," ~~(date),~~ incorporated by reference in section 2., Pre-treatment Wash Primer.

5.5.6 **Drying Times:** The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating subject to the provisions of this rule shall be determined by ASTM Designation D 1640-~~83 (Reapproved 1989)~~ 95, "Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature," ~~(date),~~ incorporated by reference in section 2., Quick-Dry Enamel and Quick-Dry Primer, Sealer, and Undercoater. The tack-free time of a quick-dry enamel coating subject to the provisions of this rule shall be determined by the Mechanical Test Method of ASTM Test Method D 1640-~~83~~ 95.

5.5.~~13~~ 6a **Surface Chalkiness:** The chalkiness of a surface shall be determined using ASTM Determination D-4214-98, "~~Photographic Reference Standard No. 1~~ Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films," ~~(date), or the Federation of Societies for Coatings Technology "Pictorial Standards for Coatings Defects," (date)~~, incorporated by reference in section 2, Specialty Primer.

5.5.7 **Exempt Compounds--Siloxanes:** The exempt compounds cyclic, branched, or linear completely methylated siloxanes, will be analyzed as exempt compounds for compliance with section ~~3~~ 5. by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," BAAQMD Manual of Procedures, Volume III, adopted 11/6/96, incorporated by reference in section 2., Volatile Organic Compound, and subsection 5.2.

5.5.8 **Exempt Compounds--Parachlorobenzotrifluoride (PCBTF)**: The exempt compound parachlorobenzotrifluoride, will be analyzed as an exempt compound for compliance with section ~~3~~ 5. by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," BAAQMD Manual of Procedures, Volume III, adopted 12/20/95, incorporated by reference in section 2.,Volatile Organic Compound, and subsection 5.2.

5.5.9 **Exempt Compounds:** Exempt compounds content under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), "Determination of Exempt Compounds," SCAQMD "Laboratory Methods of Analysis for Enforcement Samples,"~~approved 6/1/91,~~ incorporated by reference in section 2., Volatile Organic Compound, and subsection 5.2.

5.5.~~11~~10 **VOC Content of Coatings:** The VOC content of a coating is determined by Method 24 as it exists in ~~of~~ appendix A of 40 Code of Federal Regulations (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings," ~~(date)~~ 1998, incorporated by reference in subsection 5.2.

5.5.~~10~~ 11 **Alternative VOC Content of Coatings:** The VOC content of coatings subject to the provisions of this rule may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," SCAQMD "Laboratory Methods of Analysis for Enforcement Samples," ~~approved 6/1/91,~~ incorporated by reference in subsection 5.2.

5.5.12 **Methacrylate Traffic Marking Coatings:** The VOC content of methacrylate multicomponent coatings used as traffic marking coatings is determined by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings," (September 11, 1998), incorporated by reference in subsection 5.2

6. REPORTING REQUIREMENTS

~~5.2a~~ 6.1 **Clear Brushing Lacquers:** Each ~~M~~manufacturer~~s~~ of clear brushing lacquers shall, ~~within three months of the end~~ on or before April 1 of each calendar year, submit an annual report to the ~~District APCO and the~~ Executive Officer of the ARB. The report~~ing~~ shall specify the number of gallons of ~~such coatings~~ clear brushing lacquers sold in the ~~District~~ State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

~~5.2b~~ 6.2 **Rust Preventative Coatings:** Each ~~M~~manufacturer~~s~~ of rust preventative coatings shall, ~~within three months of the end~~ on or before April 1 of each calendar year, submit an

annual report to the ~~District APCO and the~~ Executive Officer of the ARB. The report~~ing~~ shall specify the number of gallons of ~~such coatings~~ rust preventative coatings sold in the ~~District~~ State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

~~5.2c~~ 6.3 **Specialty Primers:** Each ~~M~~manufacturer~~s~~ of specialty primers shall, ~~within three months of the end~~ on or before April 1 of each calendar year, submit an annual report to the ~~District APCO and the~~ Executive Officer of the ARB. The report~~ing~~ shall specify the number of gallons of ~~such coatings~~ specialty primers sold in the ~~District~~ State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

6.4 **Toxic Exempt Compounds:** For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, within three months of the end of each calendar year, report to the District APCO and the Executive Officer of the ARB the following information for products sold in the District during the preceding year:

6.4.1 the product brand name and a copy of the product label with legible usage instructions;
6.4.2 the product category listed in Table 1 to which the coating belongs;
6.4.3 the total sales in California during the calendar year to the nearest gallon;
6.4.4 the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.

6.5 **Recycled Coatings:** Each manufacturer of recycled coatings shall maintain, in written or electronic form, records as specified in subsections 6.5.1 through 6.5.3 for a period of 3 years.

6.5.1 The minimum or exact weight percent of post-consumer coating content for each recycled coating.
6.5.2 The volume of post-consumer coating used in each recycled coating.
6.5.3 The volume of virgin coating and virgin raw materials used in each recycled coating.

Table 1
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Limits are expressed in grams of VOC per liter[a] of coating ~~as applied~~ thinned to the manufacturer's maximum recommendation, excluding the volume of any water, exempt compounds, or colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.

Coating Category	Effective 7/1/2002
Flat Coatings	100
Nonflat Coatings	150
Specialty Coatings	
Bituminous Roof Coatings	250
Bond Breakers	350
Clear Wood Coatings • Clear Brushing Lacquers • Lacquers (including lacquer sanding sealers) • Sanding Sealers (other than lacquer sanding sealers) • Varnishes	 680 550 350 350
Concrete Curing Compounds	350
Dry Fog Coatings	400
Faux Finishing Coatings	350
Fire-Resistant Coatings	350
Fire-Retardant Coatings: • Clear • ~~Pigmented~~ Opaque	 650 350
Floor Coatings	100
Form-Release Compounds	250
Graphic Arts Coatings (Sign Paints)	500
High Temperature Coatings	420
Industrial Maintenance Coatings	250
Low Solids Coatings[b]	120
Magnesite Cement Coatings	450
Mastic Texture Coatings	300

Coating Category	Effective 7/1/2002
Metallic Pigmented Coatings	500
Multi-Color Coatings	250
Pre-Treatment Wash Primers	420
Primers, Sealers, and Undercoaters	200
Quick-Dry Enamels	250
Quick-Dry Primers, Sealers, and Undercoaters	200
Recycled Coatings • Flat • Nonflat	 150 250
Roof Coatings	~~100~~ 250
Rust Preventative Coatings	400
Shellacs: • Clear • Opaque	 730 550
Specialty Primers	350
Stains~~:~~ ~~• Clear and semi-transparent~~ ~~• Opaque~~	250 ~~250~~ ~~150~~
Swimming Pool Coatings	340
~~Swimming Pool Repair and Maintenance Coatings~~	~~650~~
Traffic Marking Coatings	150
Waterproofing Sealers: • Concrete • Wood	 400 250
Wood Preservatives	350

[a] Conversion factor: one pound VOC per gallon (U.S.) = 119.82 grams VOC per liter.

~~e~~ [b] Units are grams of VOC per liter (pounds of VOC per gallon) of coating, including water and exempt compounds.